ProVisual

AC-8000P

USER MANUAL

For the optimal use and maintenance of the product,

Please read the manual carefully before using it.

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Chapter One: Handling Instructions

1.1 - Operation Environment

Dear Customers, First of all thank you for purchasing our product, the Fingerprint Time Attendance Machine! For the optimal use and maintenance of the product, please read the manual carefully before using it.

1. Do not please leave the machine under the strong sunshine. It evidently effects the collection of fingerprints and lead to failure of fingerprint recognition.
2. The temperature span of the fingerprint's working is 0°C - 45°C.

1.2 - A brief introduction for the System

The fingerprint time attendance system consists of two parts: the fingerprint time attendance terminal and fingerprint time attendance management software.

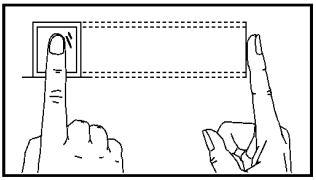
The terminal is mainly responsible for the registration of the employees' fingerprint and daily check on work attendance. And the software is mainly to read the work attendance record of the terminal, to process the statistics by following the attendance rules set by the administrator, and to generate various kinds of statistics report forms.

There are four modes for the communication of the terminal and the software: RS232, RS485, TCP/IP and U disk. RS232 and RS485 are the standard communication modes of the terminal.

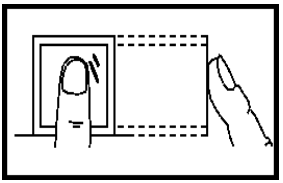
1.3 - Press Method

When installation of the terminal is completed, the fingerprints will be registered first and then followed by the validating operation. The fingers recommended for registration are the forefinger and middle finger.

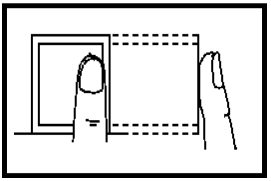
Correct press method: Press with your finger right on the fingerprint gathering window, with the fingerprint's centre aligning to the centre of the gathering window as much as possible. Finger press method is shown as the following:



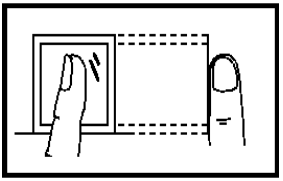
Correct



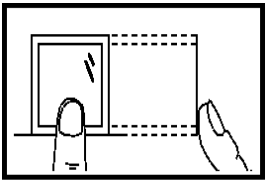
Too perpendicular



Too deflective



Tilting



Too Low

Chapter Two: Basic Functions

2.1 - Keyboard

The configuration of the keyboard is demonstrated by Figure 2-1.

Figure 2-1

The function is illustrated as Figure 2-2.

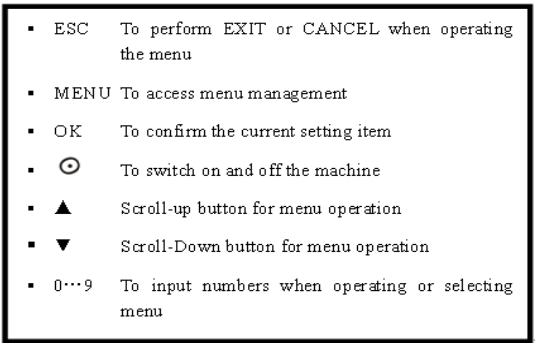

ESC To perform EXIT or CANCEL when operating the menu
MENU To access menu management
OK To confirm the current setting item
To switch on and off the machine
▲ Scroll-up button for menu operation
▼ Scroll-Down button for menu operation
0…9 To input numbers when operating or selecting menu

Figure 2-2

2.2 - Menu

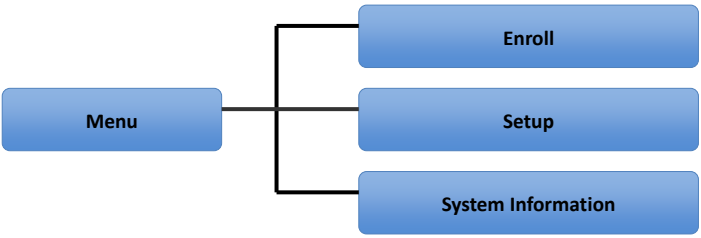
The terminal is convenient to operate, with function keys and numerical keys to perform flexible menu selection, keyboard input and various settings. The level-1 menu includes three categories: record management, setting and system information. Each menu consists of various subordinate level-2 and level-3 menus to perform corresponding operations.

2.2.1 - The Constitution of Menu

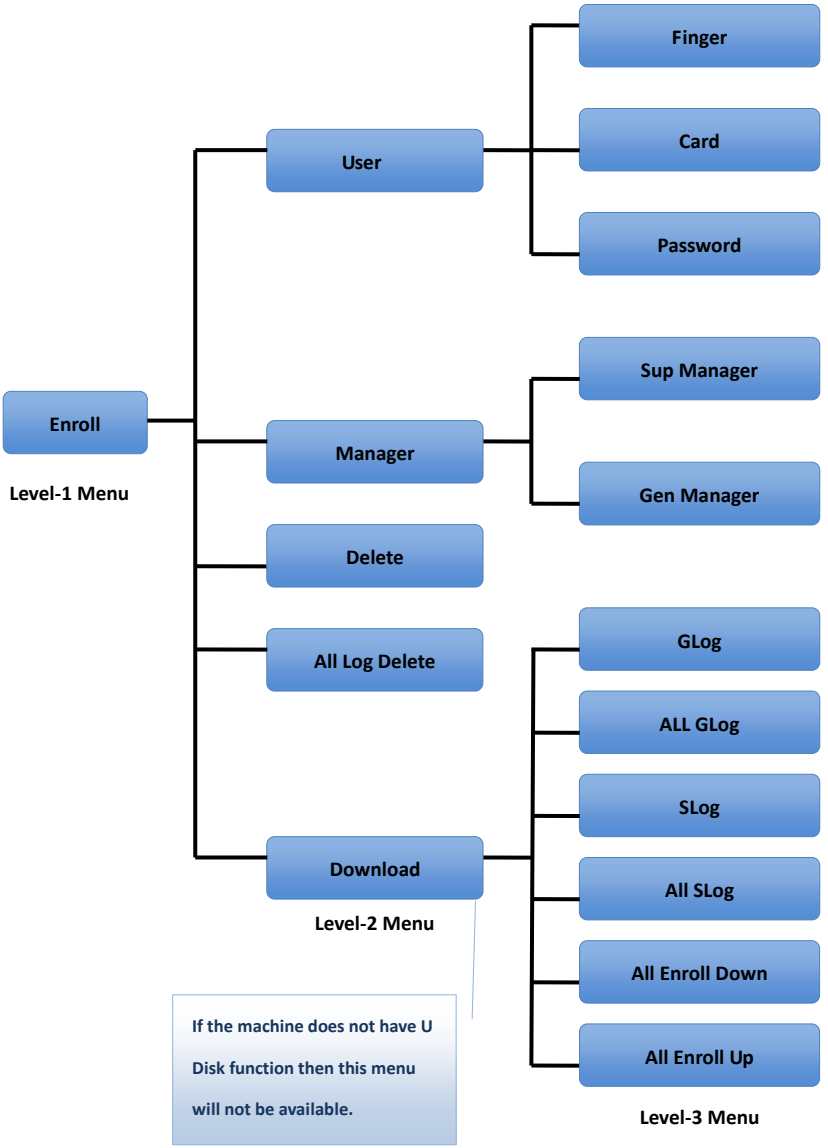
The constitutions of the level 1 menu are:

1. Data Management: To register and delete the fingerprints, passwords and data on inductive card of the users or the administrators, and to perform the functions such as examining records, setting arithmetic, security and downloading records etc..
2. Setting: To set the system information of the terminal.
3. System Information: To examine the information recorded in the terminal.

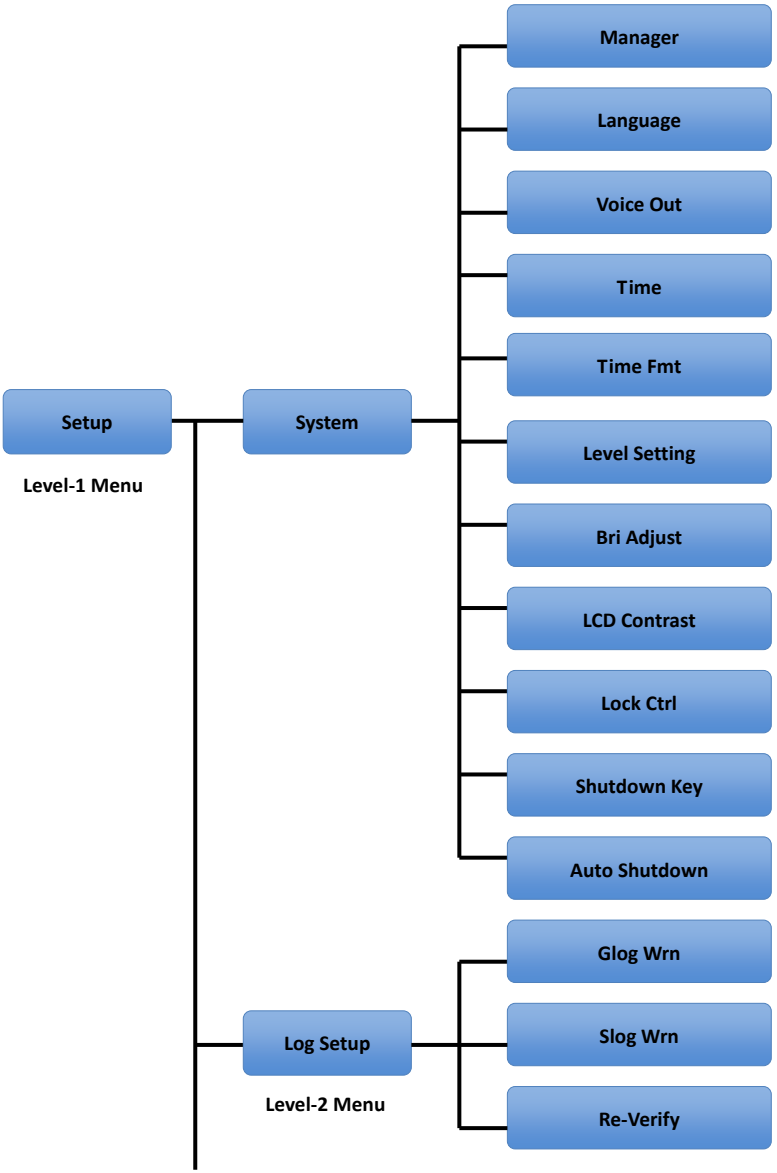
The structural diagram of the menu is demonstrated as follows:



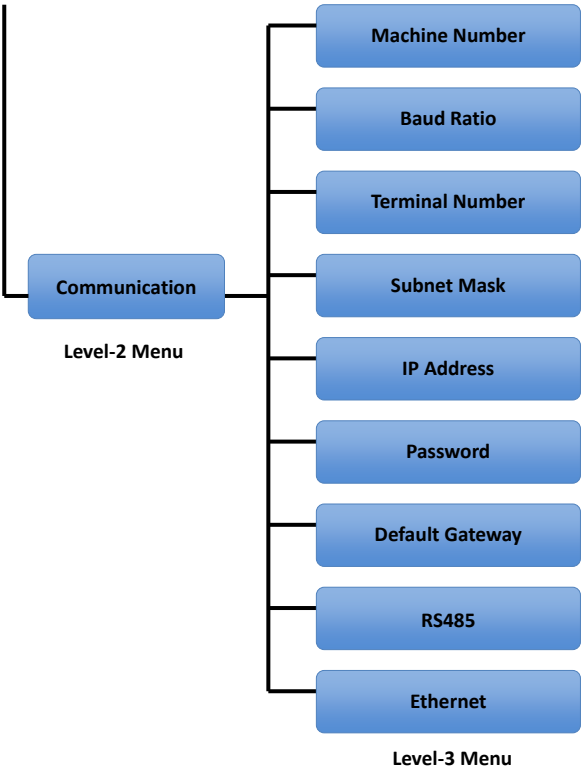
Level 1 Menu


Enroll
Level-1 Menu
User
Manager
Delete
All Log Delete
Download
Level-2 Menu
Finger
Card
Password
Sup Manager
Gen Manager
GLog
ALL GLog
SLog
All SLog
All Enroll Down
All Enroll Up
Level-3 Menu
If the machine does not have U Disk function then this menu will not be available.

2.2.1.2 - Set up

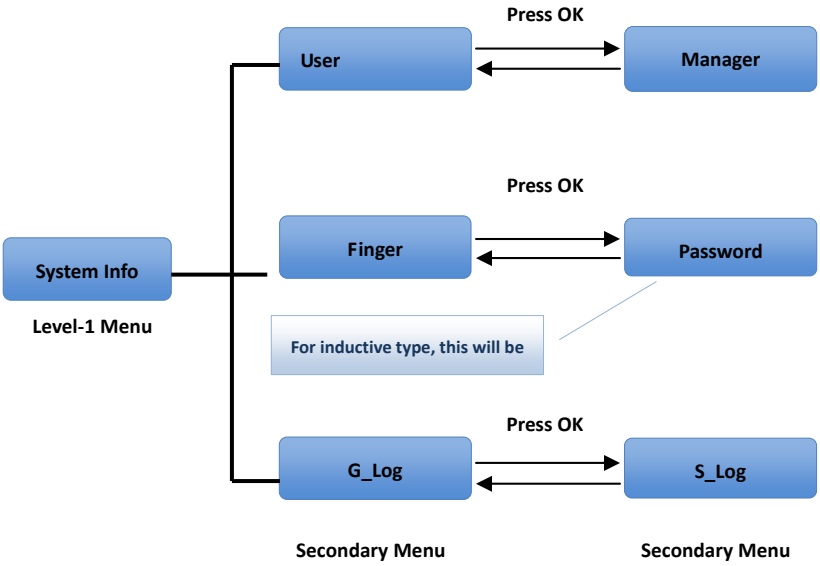


(continue to the next page)


Machine Number
Baud Ratio
Terminal Number
Communication
Subnet Mask
IP Address
Password
Default Gateway
RS485
Ethernet
Level-2 Menu
Level-3 Menu

2.2.1.3 - System Information Menu

Press OK when placing the cursor on the item of System Information in the level-1 menu to access the level-2 menu and three menu items will be displayed with six items of information available. Press OK in each menu to display another item as follows:



Note: *If the cursor is placed on the item of User Registration and OK is pressed, then the information of Administrator Registration will be displayed. Press OK again to return to the information of User Registration. The other two items are similar.*

Chapter Three: Basic Usage Instructions

3.1- Basic Usage

3.1.1 - Installing finger print time attendance terminal

A. Location: according to the place of the screw holes which are used to fixed the iron board, locate four holes on the wall district of hanging the finger print time attendance terminal

B. Punching holes: Use tools to punch holes on the decided wall districts of four holes and its size should meet the standard screw

C. Fasten the iron board: place the iron board on the appropriate place of the four holes. (The influence of strong magnetic and electric field should be avoided when fastening) Then put the screw into the holes and fasten the iron board

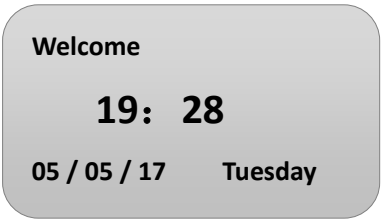
D. Hanging the terminal: hang the terminal on the iron board and fastening them with the bolts.

E. Turn on the terminal: Connect the electrical wire one side with the terminal and the other side with 220V electric socket. Then Press ⊙ button.

3.1.2 - Fingerprint Registration

There are three registration validation modes available for the terminal: fingerprint, password and inductive card. Generally speaking, machine of a certain type will have two registration modes: one is fingerprint and password mode and the other is fingerprint and inductive card mode.

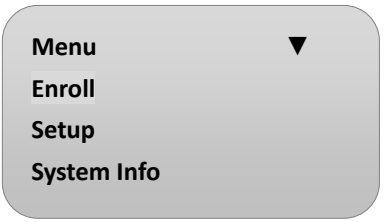
When registering the fingerprint, each person will have an exclusive ID number, which is the corresponding number of the user information in the time attendance management software to the record in the terminal. Each ID number can register 3 fingerprints and 1 password (or inductive card) at most. When the machine is in normal function, the interface will be as follows:



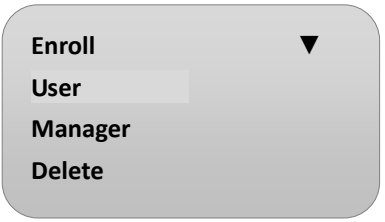
3.1.3 - Fingerprint Registration

Under normal working status, press MENU to access Menu -> Record Management ->User Registration ->Fingerprint Registration ->New Registration -> Input ID Number ->Press with the finger for three times ->Save ->Exit. Detailed procedure is as follows:

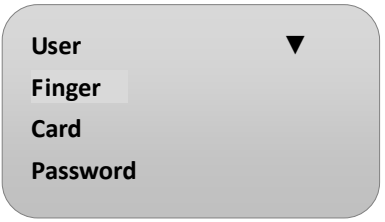
When MENU is pressed, the following will be displayed:



Press OK to display the following:

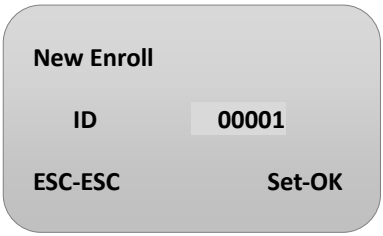


Press OK to display the following:



Press OK button to display the following:

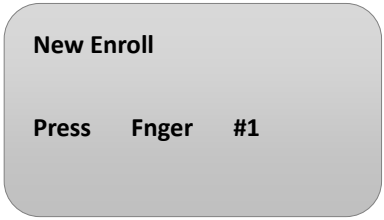
Press OK to display the following



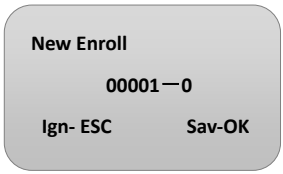
Note:
Range of numbers 1- 65535.

The ID number will be defaulted to be 00001 for the initial registration.

Input the corresponding ID number with the numerical keys , and then press OK to display the following



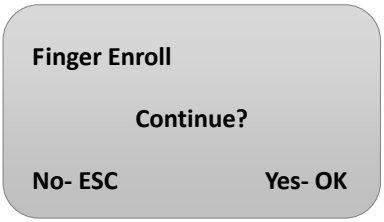
Press a finger on the sampling instrument and then move the finger away. Press it with the same finger for the second time or third time according to the instruction on the interface. If the registration is successful, the following will be displayed.



Note: 00001—0

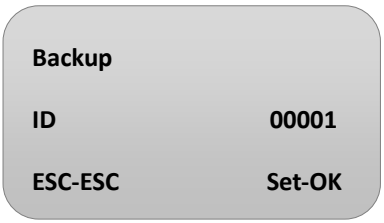
The last digit 0 represents the first fingerprint

Press OK to save it and the registration is successful, displayed as follows:



Press OK to continue registering new users while press ESC to register backup fingerprint.

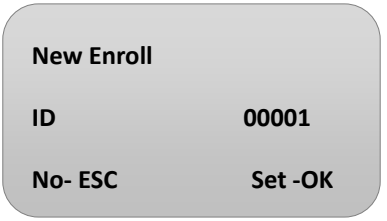
Press OK to register the new fingerprint data, to operate the registered backup of the user's fingerprint press ESC. Displayed as follows:



Press OK to choose register number (our fingerprint terminal can back up two fingerprints at most)

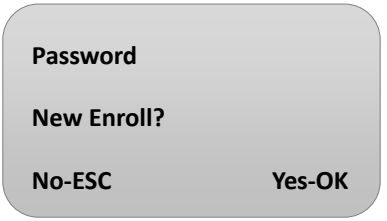
3.1.4 - Inductive card number registration

Place the inductive card on the induction area and the following will be displayed:

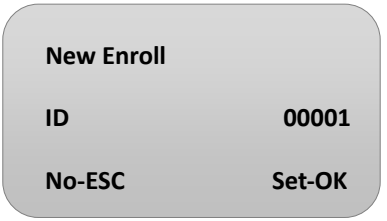


Press OK to finish registration. Press ESC to exit.

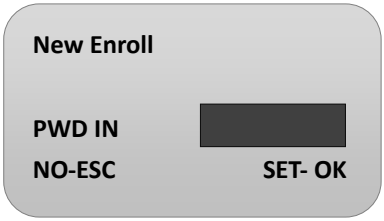
3.1.5 - Password Registration



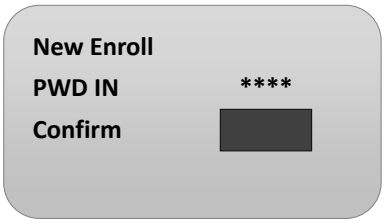
Press OK to display the following:



Input the corresponding ID number of the person and press OK to display the following:



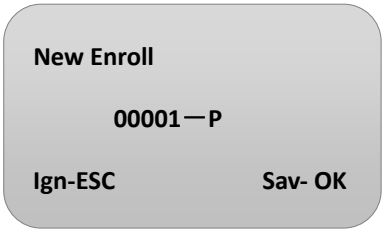
Input password and then press OK to display the following:



Note:

Four Digits in maximum for password.

When finishing inputting the password, press OK to display the following:



Note:

00001—P

The letter P means that the registration type is password

Press OK to continue registering new ID number while press ESC to exit.

Notice:

1> If there is no registration administrator, anyone can change the setting of the fingerprint terminal. If there is the registration administrator, the users must cross the administrator verification to change the setting system. Meanwhile, the terminal can set two administration authorities: “super administrator” and “administrator”. The former has the supreme power and can operate the whole setting of the fingerprint terminal. The latter can only the following setting: “user registration” “Delete registration record” “overview the administration record” “deletes registration record”

2> When in the registration, at the time of inputting ID, only to input the non-zero part and the latter numbers is ok. For example, the staff number is 00050 but the input number should be 50.

3> When in the inductive card registration, after entering the “inductive card input” and inducting your card, the ID number will automatically display on the screen, then press “OK” to reserve and the registration finished.

4> After registration, please check your fingerprint to make sure the efficiency of the fingerprint registration. The checking steps are as following: on the common working interface, press your registered fingerprint and if the verification is success, your fingerprint is clear, the registration is good. If the verification is difficult to pass, the registered fingerprint is unqualified or the fingerprint is not clear. Please over register or change another finger to register.

3.1.6 Users Verification

When verifying the fingerprint, firstly ensure whether registered. Fingerprint verification should notice the path must be correct.

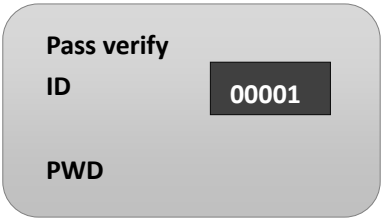
User 1: N when verifying the fingerprint, if the verification is successful, then a vocal instruction of success verification “Thank you” will be prompted

User 1:1 Fingerprint verification firstly input your registration number then press fingerprint, a vocal instruction of success verification “Thank you” will be prompted, displayed as follows:

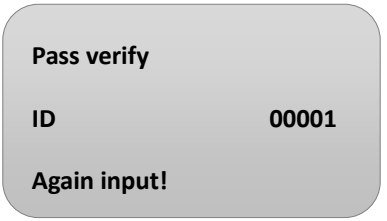
If it fails, a vocal message for failed verification “please press your finger again” will be prompted and displayed as follows:

If the terminal sets repeat time validation and users repeat time record in the period of the setting time. A vocal message will notice “thank you”. The LCD of the terminal will illustrate “Auto adapt” and save the first time record.

If the password is verified, users click their registration number on the keyboard then press “OK” and input password.



If the password verification is failed, terminal will display “please input again” after “Di Di” ring.



3.2 - Quick Connection Guide

Basic procedure for quick connection:

1> Connect the terminal to power supply.

2> Select the communication mode for the terminal RS232, RS485, TCP/IP or U Disk. (Please refer to 3.2.1\3.2.2\3.2.3\3.2.4 for specific connection method)

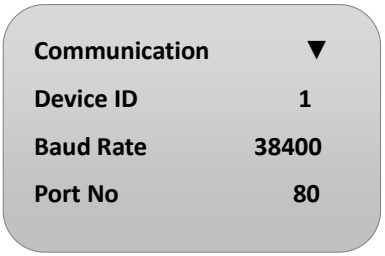
3> Turn on the terminal.

4> Install the fingerprint time attendance management software in PC.

Search the fingerprint time attendance terminal.Steps are Terminal Administration-> Equipment Setting-> Adjust relevant settings -> Search.

3.2.1 - Direct Connection through RS232

1> RS232 communication parameter setting: Press MENU to enter Menu ->Setting ->Communication Setting ->Machine Number Setting -> Baud Ratio Setting -> Press ESC ->Press OK -> Press ESC to exit. The default display of the communication setting menu is as follows :



Note: Note: For a single terminal, default setting is recommended; for multiple terminals, the machine number must not be repeated but should be set to different numbers.

When using RS232 communication parameter, the Baud Ratio of COM port of computer must be the same with that of terminal.

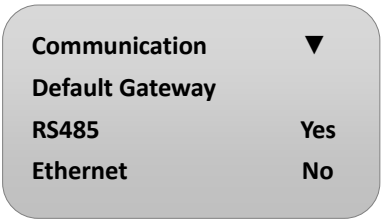
2> Turn off the fingerprint time attendance terminal

3> Connect the terminal to a PC with RS232 communication cable with one end connecting to the 9-pin communication serial port of the PC and the other end to the 232 communication interface of the terminal (Note: 9-pin serial port and RJ45 interface two types of interface are available).

4> Restart the terminal.

3.2.2 Connection through RS485

1> In Communication Setting, press **Scroll-down** button and set RS485 communication to “Yes” and Ethernet to “No”, displayed as follows:



Note: Machine number, Baud Ratio and serial port should be consistent to those of the management software. In addition, RS232/RS485 convertor is not included in standard configuration.

2> Turn off the terminal.

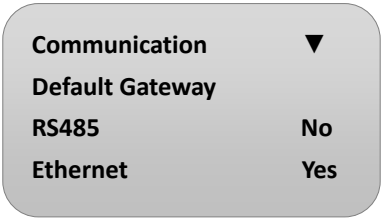
3> Connect the seventh and eight pins of the supplied RJ45 bare wire to the 485+ and 485- of the convertor respectively. (Please refer to appendix 5.2 for the definition of wire connection)

4> Connect RS485 convertor to the serial port of the PC and the other end to the RJ45 interface of the terminal

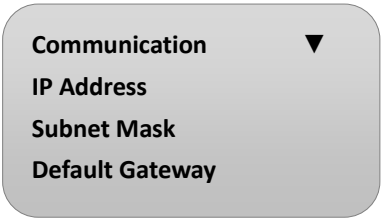
5> Restart the terminal.

3.2.3 Network Connection through TCP/IP

1> In communication setting, press Scroll-down to set RS485 communication to “No” and set Ethernet to “Yes”, displayed as follows:



2> Set the IP address, subnet mask and default gateway to those of the LAN, displayed as follows:



Note:
The IP address of TCP/IP communication should be unique. Password is the communication code. It should be consistent to the one in the management software.

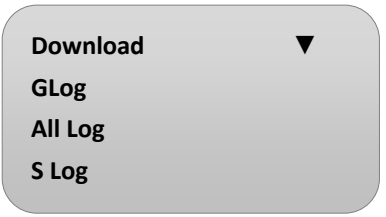
3> Connect the network cable of the LAN to the RJ45 interface of the terminal.

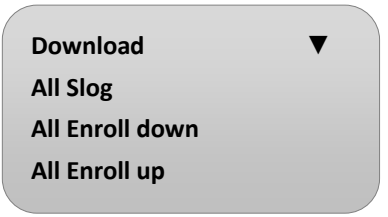
4> Turn on the terminal.

3.2.4 - Connection through U disk

1> Plug the supplied U disk into the USB interface of the terminal

2> Press OK in Download of Enroll as follows:





3> Select GLog, press OK to download record.

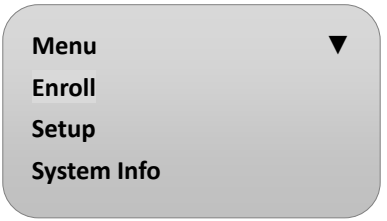
4> Select All Log and press OK. Start downloading all restored time record.

5>Select SLog and press OK. Start downloading new management record.

6> Select All Slog and press OK. Start downloading all management record in the terminal.

Chapter Four: Administrator Manual

In normal working status, press MENU to display the follows when there is no administrator registered:



If there is any administrator registered, the following will be displayed:

If the validation for the administration status fails (Incorrect fingerprint, password or inductive card), then the message of “Illegal Operation!” will be displayed, and prompt tones will be sent out. The validation for the administration status should be restarted again. And if it succeeds, then you can access the menu interface.

Warm Notice:

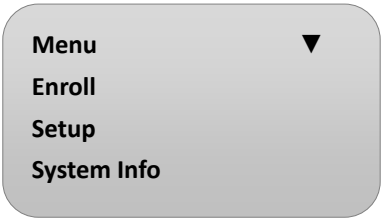
1> For administrator registered with fingerprint, press MENU first , and press the fingerprint registered in the sampling window. After successful validation, the menu interface will be displayed.

2> For administrator registered with password, press MENU first , input the registered numbers, press OK, then input the password followed by pressing OK. When it is confirmed, the menu interface will be displayed.

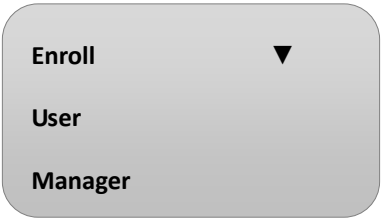
3> For administrator registered with inductive card, press MENU first, and then place the registered card to the inductive area. If it marches correctly, the menu interface will be displayed.

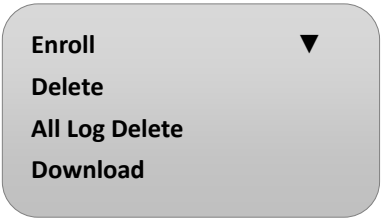
4.1 - Enroll Management

Level-1 menu interface is displayed as follows:



Press the Scroll-down button in the interface to go through corresponding menu. If the menu of Data Management is selected, press OK to enter the level-2 menu interface as follows:





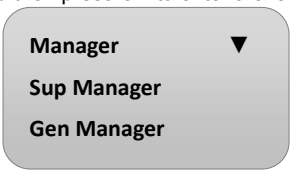
There are totally five leve-2 menus in Enroll Management, Administrator registration, U disk download, Delete registration data and delete all records.

4.1.1 - User registration

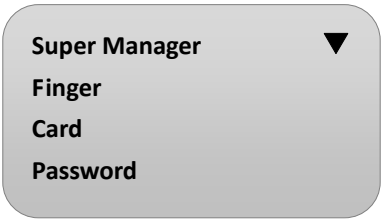
The detailed steps are the same with 3.1.2/3.1.3/3.1.4.

4.1.2 - Administrator registration

Select Manager Menu and then press OK to enter the leve-3 menu as follows:

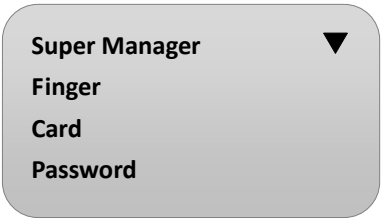


Select Super Registration menu and then press OK to enter the leve-4menu as follows:



Steps are the same with 3.1.2/3.1.3/3.1.4

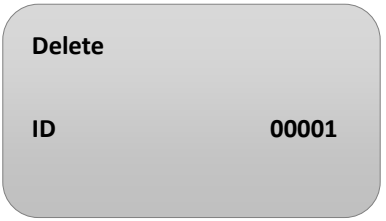
Select Manager Menu and then press OK to enter the leve-4 to choose normal manager validation as follows:



Steps are the same with 3.1.2/3.1.3/3.1.4.

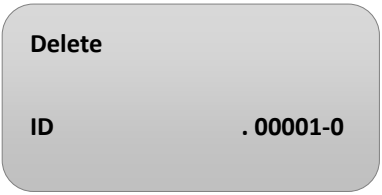
4.1.3 - Delete registration data

Select Delete registration data menu, Press ok to enter level-3, as following:



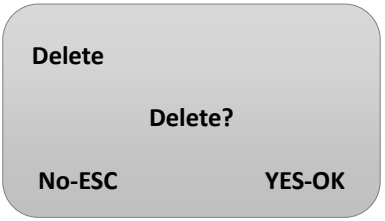
Input registration NO. Needed to delete, such as the number 00001 then press OK,

the display is as following:



Note:
The last 0 of 00001-0 stand for the fingerprint number 0 means the first one)

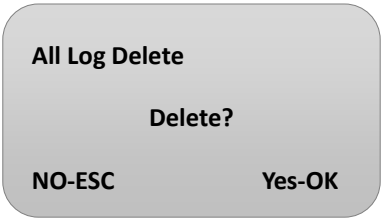
Press 0K to verification, display as following:



Press OK and Deleting successes, after a voice of DI and the display of “no registration data!” then go back to Continue deleting interface. Press ESC cancel exit.

4.1.4 – Delete All Records (All Log Delete)

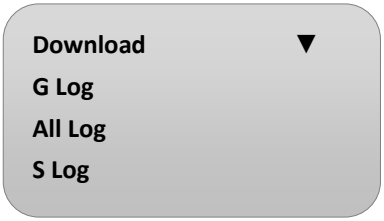
Select Delete All Records menu and press OK to access the leve-3 menu as follows:



Press OK to delete all outgoing and incoming record while press ESC to cancel and exit.

4.1.5 Download for U Disk

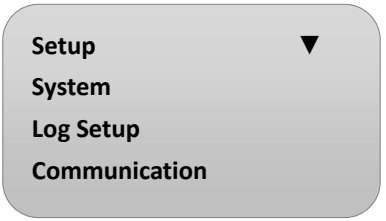
Select Download menu, and press OK to access the level-3 menu as follows:



When downloading with U disk, insert the supplied U Disk into the USB interface of the machine and select GLog to Press OK to downloading it. If it needs to be downloaded again, only select All Log and press ok .Successful downloading will display the message of “Download OK”. And SLog is in the same way.

4.2 - Setup

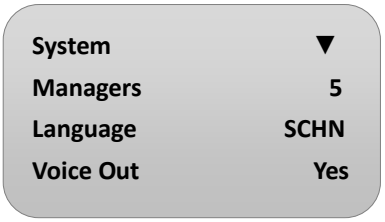
In normal working status, press MENU to enter and select Setting menu. Then press OK to access the level-2 menu with the following display:

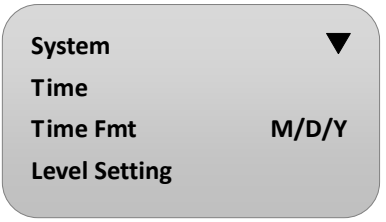


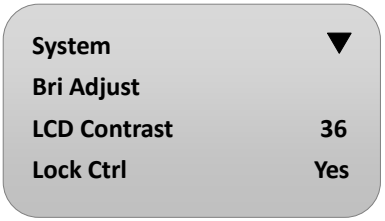
The Setting menu consists of system setting, record setting, communication setting and t seven-color Setting four level-2 menu.

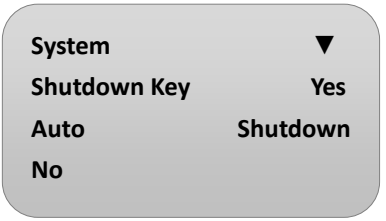
4.2.1 - System Setting

In System, press OK to display the following









There are totally eleven level-3 menus in System Setting including : Total number of administrators, language, voice suggestion, time setting, time format, security-level setting, gathering sensitivity control, LCD back light control, lock time-lapse, shut-down and auto shutdown.

1> Managers

Setting Items	Explanation
1-10	Set the total number of the administrators for the terminal
Factory Setting	5

2> Language

Setting Items	Explanation
SCHN	Content in the interface is displayed in simplified Chinese
TCHN	Content in the interface is displayed in Traditional Chinese
ENG	Content in the interface is displayed in English
KOR	Content in the interface is displayed in Korean
Factory Setting	Simplified Chinese

3> Voice out

Setting Items	Explanation
Yes	Time setting for the terminal.
No	At the time of validating, there's no voice suggestion, the voice suggestion of pass is DI DI DI and not pass is DI
Factory Setting	Yes

4> Time

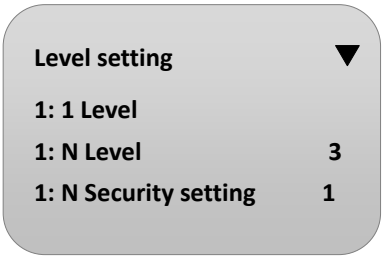
Setting Items	Explanation
Time Setting	Press Scroll-down and Scroll-down or directly input numbers of correct time to set the terminal time.
Factory Setting	The time-setting of terminal is coinciding with the computer time of management software and can be set in the software.

5> Time format

Setting Items	Explanation
Year/Month/Date	According year/month/date to display time.
month/date/year	According month/date/year to display time
Factory Setting	Year/Month/Date

6> Level setting

Select safe security setting menu. Press OK to enter level-3 menu.



Note:

The safe range of 1:1 is between 0~50 and the suitable number is 27.The safe range of 1: N is between 1~4 and the suitable number is 1.

Safe security level setting is the balance value of FRR and FAR. Misrecognition means to fingerprint terminal recognize the fingerprint of user A as use B. The FAR means to the terminal has denied the registered fingerprint. The safety number of 1: N is based on the safety-level value of all users however the safety number of 1:1 is based on the safety-level value of the special user which is hard to pass.

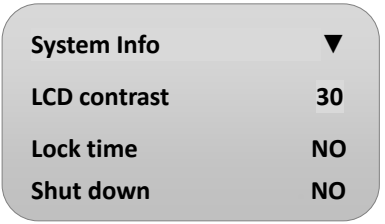
Generally, users can set the safety-level value of all users （the default value of 1 : N is 1) But for some special user who are hard to pass, they can use validation of 1:1 (ID + fingerprint). If their fingerprints are hurt, manager can decline their safety-level value to advance the rate of validation.

7> Gathering sensitivity control

In the system setting menu, select Bri Adjust and press ok. It will display as following:

The terminal will adjust fingerprint to the best state, then press confirm to save it.

8> LCD backlight control



9> Lock time-lapse function

Setting Items	Explanation
Yes	When confirmed, the control signal of the electrical lock is output.
No	When confirmed, no signal of the electrical lock is output.
Factory Setting	Yes

10> Shut down

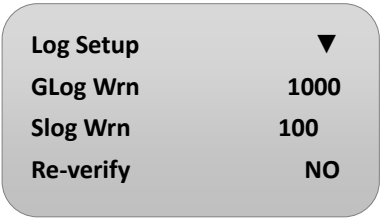
Setting Items	Explanation
Yes	When confirmed, the terminal can set auto shut-down
No	When confirm. the terminal will not stop auto shut-down
Factory Setting	NO

11> Auto Shut-down

Setting Items	Explanation
1—255	If there is no operation on the terminal and the time for auto shut-down is set, then the function of the machine is enabled. The unit is “Minute”.
Factory Setting	No

4.2.2 – Record Setting (Log Setup)

Select Log Setup menu, press OK to enter the level-3 menu as follows:



There are three level-3 menus in Log Setup: GLog Warn , Slog warn and Re-verify

1> General Log Warn

Setting Items	Explanation
No	The terminal will not give out alert when the records are overflowed. If the management records are overflowed, then the terminal is incapable to store the overflowed management record
1-255	The terminal will give out alert according to the value set to inform the overflow of management record. If the value is 100, then the alert will be given out from the 900th record. If the management records are overflowed, then the terminal is incapable to store the overflowed management record.
Factory Setting	100

Notice: Users are informed by message and voice prompt that the management record storage space is about to be full.

2> System log warn

Setting Items	Explanation
No	Indicates that the terminal will not give out alert when the outgoing and incoming records are overflowed. If the outgoing and incoming records are overflowed, then the overflowed records can not be stored.
1 - 1500	The terminal will inform that the records are overflowed according to the value set. If the outgoing and incoming records are overflowed, then the terminal will be incapable to store the overflowed records.
Factory Setting	1000

Note: Users are informed by message and voice prompt that the management record storage space is about to be full. Once record alert is given out, please download the record as soon as possible.

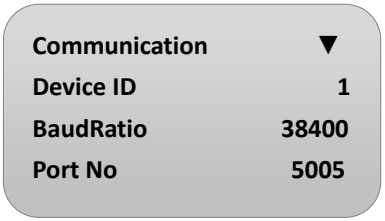
3> Re-verify

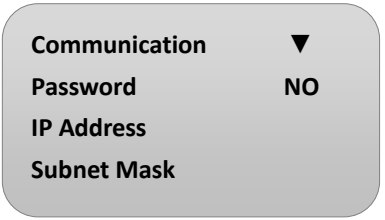
Setting Items	Explanation
No	Indicates that the terminal will not inspect the repeat checks on work attendance.
1 - 255	Indicate the terminal will inspect the repeat checks on work attendance according to the value set with the unit “Minute”.
Factory Setting	No

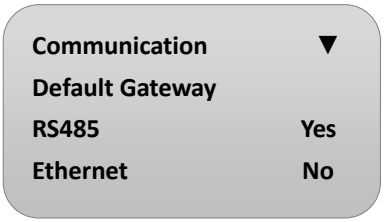
Note: To inspect whether users check on work attendance repeatedly, if the user check on work attendance repeatedly, no repeated record will be stored.

4.2.3 - Communication Setting

Select Communication and press OK to access the level-3 menu displayed as follows:







There are nine level-3 menus available for System Setting: machine number, baud ratio, port number, password, IP address, subnet mask, default gateway, RS485 and Ethernet gateway.

1> Device ID

Setting Items	Explanation
1—255	To set the ID number for machines.
Factory Setting	1

Note: Machine number is the unique ID for the machine. If there are two machines with the same machine number in the network, not only can they not work properly, but also the management software will be confused when acquiring the time attendance record. So the uniqueness should be attached with attention in network use.

2> Baud Ratio

Setting Items	Explanation
9600	The Baud Ratio of Communication Port is set to be 9600bps
19200	The Baud Ratio of Communication Port is set to be 19200bps
38400	The Baud Ratio of Communication Port is set to be 38400bps
Factory Setting	38400

Note: The value must be set consistently to the communication ports of the PC Administration Machine; otherwise, no communication can be made.

3> Port Number

Setting Items	Explanation
1 - 9999	To set the software port of the TCP/IP communication of the terminal
Factory Setting	5005

Note: The port must be consistent to port number of the software in the PC administration machine. Otherwise no communication can be made.

4> Password

Setting Items	Explanation
0 - 999999	Set the access password of TCP/IP communication
Factory Setting	No

5> IP Address

Setting Items	Explanation
192.168.1.224	Set the IP address of the machine when access through TCP/IP communication.
Factory Setting	192.168.1.224

Note: The IP address in the LAN is unique

6> Subnet Mask

Setting Items	Explanation
255.255.255.0	Set the subnet mask of the LAN when using TCP/IP communication
Factory Setting	255.255.255.0

Note: Subnet mask must be consistent to the one in the LAN.

7> Default Gateway

Setting Items	Explanation
192.168.1.1	Set the default gateway of the LAN when using the TCP/IP communication
Factory Setting	192.168.1.1

Note: The default gateway must be consistent to the one of the LAN.

8> RS485 Communication

Setting Items	Explanation
Yes	Set RS485 communication switch
Factory Setting	Yes

Note: RS485 communication switch for the RS485 communication function of the machine. If the machine has TCP/IP function, it is defaulted to be “OFF”; otherwise it is set to be “ON”.

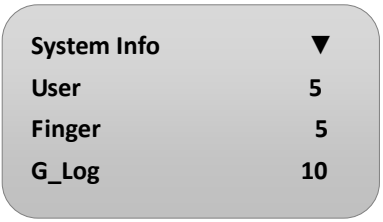
9> Ethernet

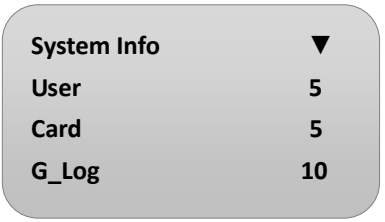
Setting Items	Explanation
Yes	Set the switch of TCP/IP communication
Factory Setting	Yes

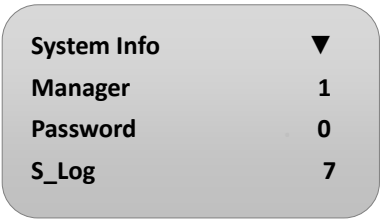
Note: TCP/IP communication is the switch for the TCP/IP communication function of the machine. If the machine has TCP/IP function ,it is defaulted to be “OFF”, otherwise it is set to be “ON”.

4.3 - System Information

Select System Info menu and press OK to access the level-3 menu as follows:







There are seven level-3 menus in System Info, namely user registration (User), Manager Registration (manager), fingerprint registration (Finger), password registration (Password), inductive card registration (Card), G_Log and S_Log. These items can be switched through the OK button.

1> User: to view the total number of users registered.

2> Manager: to view the total number of administrator registered.

3> Finger: to view the total number of fingerprint registered.

4> Card: view the total number of inductive card registration.

5> Password Registration: to view the total number of password registered.

6> G_Log: to view the total number of outgoing and incoming record.

7> S_Log: to view the total number of management record.

Chapter Five: Appendix

5.1 - Interface Definition

There are three types of interfaces for the fingerprint time attendance terminal: 9-pin RS232 interface, RJ45 interface and expand 8-pin external extension interface.

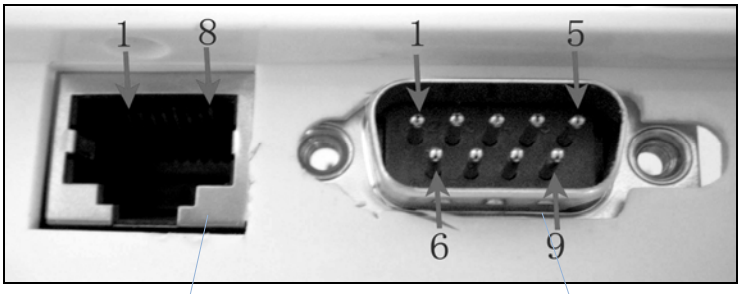
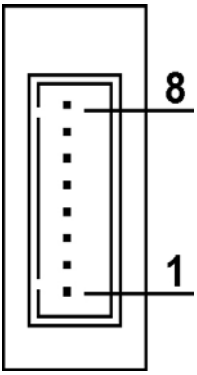


Figure 5-1

RS232 interface provides RS232 communication, Lock or Wiegand output function; while RJ45 interface provides RS485 and TCP/IP communication function.



Expand eight slit port to supply simple attendance and standard Wiegand port or RS232 interface

Figure: 5-2

5.2 - Interface Definition

5.2.1 - RS232 Interface

The interface (refer to page 63 figure 2 - 3) provides RS232 communication, Lock and Wiegand entrance guide function with 9 pins in total. Definition of each pin is listed in the following table:

PIN	Definition
1	Reserved
2	RS232 TX
3	RS232 RX
4	LOCK | Data1
5	GND
6	Reserved
7	Data0
8	Reserved
9	Reserved

PIN	Definition
1	TCP_TX+
2	TCP_TX-
3	TCP_RX+
4	
5	
6	TCP_RX-
7	RS485A
8	RS485B

Note: Connect with the fourth and fifth pins when using the simple entrance guard; while connect with the fourth, fifth and seventh pin when adopting Wiegand output.

5.2.2 - RJ45 Interface

The interface provides RS485 and TCP/IP communication function。 For different terminals, some of them provide two RJ45 interfaces and thus the definition depends on the number of RJ45 interfaces of the terminal. And the definition is as follows:

1>Definition for the machine with a single RJ45 interface

（Refer to page 10 Figure 2-3 ）:

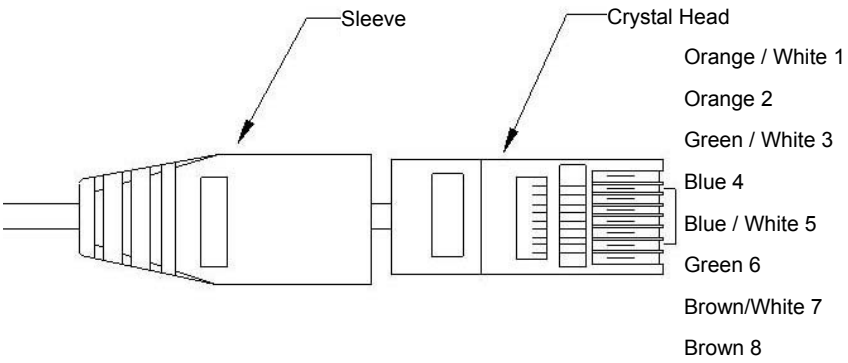
5.2.3 - 8-Pin Extension Interface

Some fingerprint time attendance terminals are equipped with a 8-pin extension interface (Refer to Page 64 Figure 2 - 4) with the following functions: RS232, RS485, TCP/IP, Lock, Wiegand, 5V or 12V power supply, 8pins in total and the definition of each pin is listed in the following table:

PIN	Definition
1	WIEGAND_OUT+
2	WIEGAND_OUT-
3	WIEGAND_IN+
4	WIEGAND_IN+
5	GND
6	RELAY-
7	POWER_IN
8	GND

5.3 - Connection Cable

The order of the supplied RJ45 connection cable is shown as follows:



Schematic diagram of RJ45 connection cable head (The other end is bare wire)